

## Health Advisory:

Influenza in Missouri,  
2014

December 24, 2014

This document will be updated as new information becomes available. The current version can always be viewed at <http://www.health.mo.gov>

The Missouri Department of Health & Senior Services (DHSS) is now using 4 types of documents to provide important information to medical and public health professionals, and to other interested persons:

**Health Alerts** convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies, and/or the public.

**Health Advisories** provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

**Health Guidances** contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

**Health Updates** provide new or updated information on an incident or situation; can also provide information to update a previously sent Health Alert, Health Advisory, or Health Guidance; unlikely to require immediate action.

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Health Advisory  
December 24, 2014

FROM: GAIL VASTERLING  
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SUBJECT: Influenza in Missouri, 2014

This Missouri Department of Health and Senior Services (DHSS) Health Advisory summarizes 2014-2015 influenza season activity in Missouri through December 13, 2014, and highlights the availability of influenza surveillance for the state.

As of December 13, 2014, the estimated influenza activity level in Missouri is characterized as “Widespread.” A total of 7,498 laboratory-positive influenza cases have been reported statewide since the beginning of the 2014-2015 season. Influenza A has accounted for 93% of reported cases; influenza B, 6%; and influenza unknown or untyped, 1%. Laboratory surveillance data suggests influenza A (H3) is likely causing the majority of influenza cases in the state. All 11 of the laboratory-confirmed influenza cases reported by the Missouri State Public Health Laboratory (MSPHL) during Week 50 were influenza A (H3). Influenza-like illness (ILI) activity is also above baseline for both the Missouri Outpatient ILI Surveillance Network (ILINet) and hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI was 6.78% and 3.4% through ILINet and ESSENCE respectively.

Influenza has been reported in persons of all ages in Missouri. However, the highest rates of influenza cases reported to date this season are among young children aged 0-4 years, followed by children aged 5-14 years. During past seasons when influenza A (H3N2) viruses have predominated, higher overall and age-specific hospitalization rates, and higher mortality, have been observed (especially among older people, very young children, and persons with certain chronic medical conditions) compared with seasons during which influenza A (H1N1) or influenza B viruses have predominated.

MSPHL submits a sample of influenza isolates to the Centers for Disease Control and Prevention (CDC) for viral characterization throughout the influenza season. CDC has antigenically characterized four influenza isolates so far this influenza season from Missouri: three were influenza A (H3N2) A/TEXAS/50/2012-like and one was influenza A H3N2 virus antigenically similar to the A/Switzerland/9715293/2013. Influenza A/TEXAS/50/2012 is included in the 2014-2015 influenza vaccine for the Northern Hemisphere. A/Switzerland/9715293/2013 is related to, but antigenically and genetically distinguishable, from the A/Texas/50/2012 vaccine virus. CDC reports 67.5% of viruses collected from U.S. laboratories since October 1, 2014, were antigenically different (drifted) from the influenza A H3N2 component of the 2014-2015 influenza vaccine. <http://www.cdc.gov/flu/weekly/>

Because of the detection of these drifted influenza A (H3N2) viruses, a Health Advisory was issued by CDC on December 3, 2014, <http://health.mo.gov/emergencies/ert/alertsadvories/pdf/CDCHAN374.pdf>. The advisory re-emphasized the importance of the use of neuraminidase inhibitor antiviral medications when indicated for treatment and prevention of influenza, as an adjunct to vaccination. A detailed summary of the CDC recommendations for influenza antiviral medications for the 2014-2015 season is available at <http://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm#summary>.

CDC also recommends clinicians continue to encourage virtually all patients 6 months and older who have not yet received an influenza vaccine this season to be vaccinated against influenza. The influenza vaccine contains three or four influenza viruses depending on the influenza vaccine—an influenza A (H1N1) virus, an influenza A (H3N2) virus, and one or two influenza B viruses.

Therefore, even if vaccine effectiveness is reduced against drifted circulating viruses, the vaccine will protect against non-drifted circulating vaccine viruses. Further, there is evidence to suggest that vaccination may make illness milder and prevent influenza-related complications. Such protection is possible because antibodies created through vaccination with one strain of influenza viruses will often “cross-protect” against different but related strains of influenza viruses.

Medical providers should be aware that DHSS publishes a Weekly Influenza Report each Tuesday from early October through May. (The most recent report can be accessed at <http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>. The report provides a comprehensive assessment of influenza activity in the state, and contains aggregate influenza information at a county, regional, and state level. The descriptive data pertaining to influenza provided in the report includes age groups, geographic distribution, circulating viruses, emergency room visits and hospitalizations, etc. Influenza surveillance data may be helpful in the diagnosis and treatment of patients with influenza-like illness and for hospital preparedness activities related to influenza.

MSPHL conducts influenza testing that includes viral culture or RT-PCR on a sample of influenza specimens during each influenza season. The tests conducted at MSPHL will not identify the viral characterization of the virus (i.e., determine if it is a “drifted” virus); however, a sample of influenza isolates from MSPHL are routinely sent to CDC for viral characterization. Medical providers should consider sending respiratory specimens to MSPHL for confirmatory testing when:

- ✓ A patient is a suspected influenza-associated pediatric death
- ✓ A patient is associated with an outbreak of influenza or ILI in an institutional setting.
- ✓ A patient has had recent close exposure to pigs, poultry, or other animals and novel influenza A virus infection is possible (e.g. influenza viruses circulate widely among swine and birds, including poultry, and also can infect other animals such as horses and dogs).

**Before any specimen is sent to MSPHL for testing, DHSS staff must first be consulted by calling 573/751-6113.**

Collect nasopharyngeal, nasal, or throat swabs using a Dacron/flocked swab or equivalent and any commercially available viral transport media. Tracheal aspirate and bronchoalveolar lavage (BAL) specimens could be submitted as well. Fill out a requisition form at <http://health.mo.gov/lab>. After collection, specimens must be stored at 2-8 °C and shipped (preferably utilizing MSPHL Courier) to MSPHL on frozen refrigerant packs within three days OR stored at -70°C and sent on dry ice if held longer than 3 days.

**For More Information:**

- Weekly Influenza Data and Statistical Information for Missouri  
<http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>
- Influenza Vaccines Available in United States, 2014–15 Influenza Season  
<http://www.cdc.gov/flu/protect/vaccine/vaccines.htm>
- Information for healthcare professionals on the use of influenza antiviral medications:  
<http://www.cdc.gov/flu/professionals/antivirals/>
- Summary of Influenza Antiviral Treatment Recommendations for clinicians:  
<http://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm#summary>
- Diagnostic Testing for Influenza: <http://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm#diagnostic>
- Interim Guidance for Influenza Outbreak Management in Long-Term Care Facilities:  
<http://www.cdc.gov/flu/professionals/infectioncontrol/ltc-facility-guidance.htm>

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Questions should be directed to DHSS’ Bureau of Communicable Disease Control and Prevention at 573/751-6113, or 800/392-0272 (24/7).